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FOREST FARMING



TREE CROPS FOR PROFIT



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FOREST SERVICE

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FARMERS SAY

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Cut the good trees only when they

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not in giving the children a good edu-
cational furnished lumber, posts, and fuel for

NORTH CAROLINA—

"My woods are my bank. I keep going to it and getting money,
and each time the money keeps right on coming back."

ARKANSAS—

A farmer in the white oak section of the Ozark Mountains
said that timber was the chief source of their living. "Cross-ties
are legal tender around here. We bring in our ties and take
home flour, sugar, coffee, tobacco, calico, and overalls."

MINNESOTA—

"Timber farming is different now from the old days when
woods work was just chopping down trees and cutting them up,
just as you came to them, one after the other. Now you take care
of them as a paying farm crop."

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81

TIMBER IS A FARM CROP

When the modern farmer talks of crops, he includes his timber crop. His farm woods yield him cash income. Trees grow on the less fertile soils not needed for other agricultural uses. While growing they require no fertilizer or cultivation. The sale of their products tides him over lean years. He looks to his timber crop for profit.

In the United States in 1935, according to the Federal Bureau of the Census, were 6,812,350 farms. The average area of woodland on all farms was 27 acres—not quite 18 per cent of the average farm acreage. Progressive farmers in many states have proved that, if that 18 per cent of the farm is handled as a timber crop, it will pay cash dividends.

Forest farming is recognized as an important part of agriculture that has been too long neglected. Every farmer knows that wood, in its various forms, is essential for the successful operation of a farm property. Timber is a poor-land crop. Hills that are rocky and steep, sites that are too wet or too dry, soils that are infertile or worn out will grow trees.

Farm forests in many sections of the country supply most, if not all, of the timber needed for farm buildings, fences, fuel, repairs of all kinds, and many other uses. Surpluses are often sold in the form of standing timber, saw logs, posts, poles, cross-ties, pulpwood, fuelwood, and blocks or billets for the manufacture of handles, spools, boxes, barrels, and excelsior.

But even if the farmer sells no timber his woodland pays for itself. Every farm needs wood products of various kinds. If they are not grown at home they have to be bought in open market. Consequently, the use of home-grown wood products saves money often needed for other farm and family purchases. Because they are usually conveniently at hand, they also save the busy farmer's time.

To yield the farmer his greatest profit and usefulness, the farm woodland should be fully stocked with high-quality trees. Unused land, not needed for other agricultural purposes, should be planted to trees. No farmer can afford to pay taxes on idle land.

Timber is a farm crop. Furthermore, it can be made a paying farm crop.

WHAT FARMERS SAY

PENNSYLVANIA—

"Farm your woods as you do a crop of corn. Take out the weed trees and the unhealthy and crippled ones, and give the best trees a chance to develop. Cut the good trees only when they are ripe."

OHIO—

"Money from the sale of timber has helped to pay for the farm, take care of taxes, and assist in giving the children a good education, and in addition has furnished lumber, posts, and fuel for the farm."

NORTH CAROLINA—

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FOREST FARMING IS A PART-TIME OCCUPATION

The farmer's work is never done. But forestry in the farm woods is a part-time occupation which may be carried on in the winter months when other work is less pressing.

Most agricultural crops require preparation of the soil, fertilizing, and constant cultivation. Timber requires no special attention beyond protection from fire and livestock, and careful use of the axe and saw.

Even with the utmost effort many farm families cannot adequately support themselves from their field and orchard crops and livestock. Harvesting wood crops during the slack winter months provides welcome cash income, and in addition keeps teams and equipment in use that might otherwise be idle.

Nearly every kind of forest product can be satisfactorily handled in the winter. Logs cut at that time are not subject to rapid drying and deep checking at the ends. Timber felled in cold weather is not damaged by insects which often cause losses in hot months. Damage by wood-rotting fungi and staining is prevented when cutting is done in the winter.

Progressive farmers are accustomed to applying modern scientific principles of agriculture to their field crops as a matter of course. The principles of good forestry management are easily understood by the average woodland owner.

Farm woods respond readily to the application of simple forestry methods. Most important of these are protection from fire and livestock, and careful use of the axe and saw.

Fire, fortunately, is not ordinarily a serious problem in the farm woods. But injury by livestock frequently is. Animals turned into the farm woods for unrestricted grazing may do considerable damage. They tramp down, root up, and eat the young seedlings needed to produce the forest of the future. Their sharp hoofs may bruise exposed roots, permitting fungous diseases, which cause death or decay to enter the trees.

The reason for the poor quality of timber present in many woodland properties can be traced to the continuous removal of the best trees. Over a period of years, if only the highest grade trees are cut, the remaining stand will consist largely of inferior kinds.

With careful harvesting of wood products, the forest farmer may practice sustained yield forestry. He may cut his timber and have it, too. Growth will balance cut. In the long run he can increase his profits as well as his production, and still have his woods in better shape than when he did not practice forestry.

H O M E
"Be It Ever So Humble"



FIG. 1

This home in Cherry County, Nebraska, has one lone tree and a bare horizon for miles and miles. Note the pile of cow-chips in the backyard and the pathetic attempt to build a fence. This farmer needs farm woodlands.



FIG. 2

This home is surrounded by woodlands and radiates an atmosphere of comfort and contentment. Besides their protective value and scenic beauty, these woodlands provide cash income for their owner.

FARM WOODLANDS OF NEW HAMPSHIRE

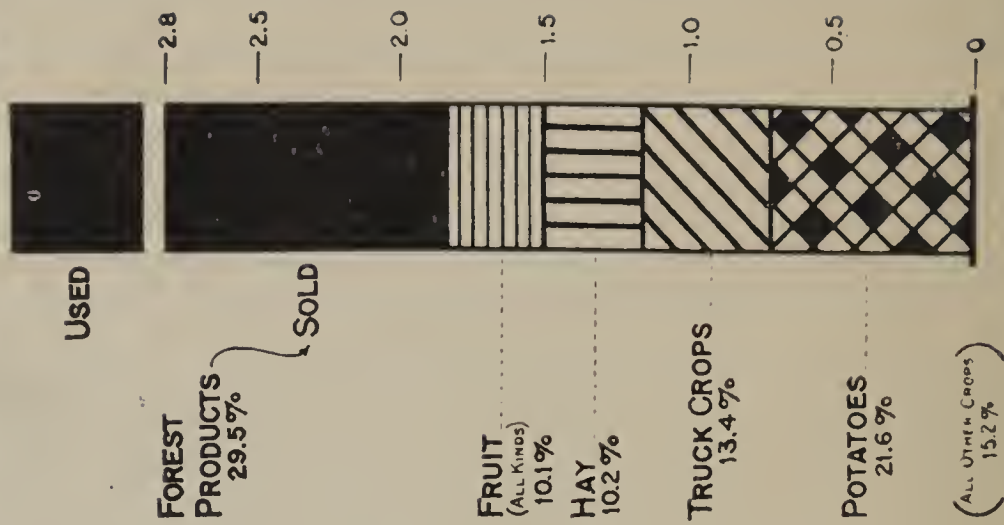
FARM LAND AREAS

ACRES
(MILLIONS)



CASH INCOME FROM FIVE LARGEST CROPS

(ALSO VALUE OF USED FOREST PRODUCTS) DOLLARS (MILLIONS)

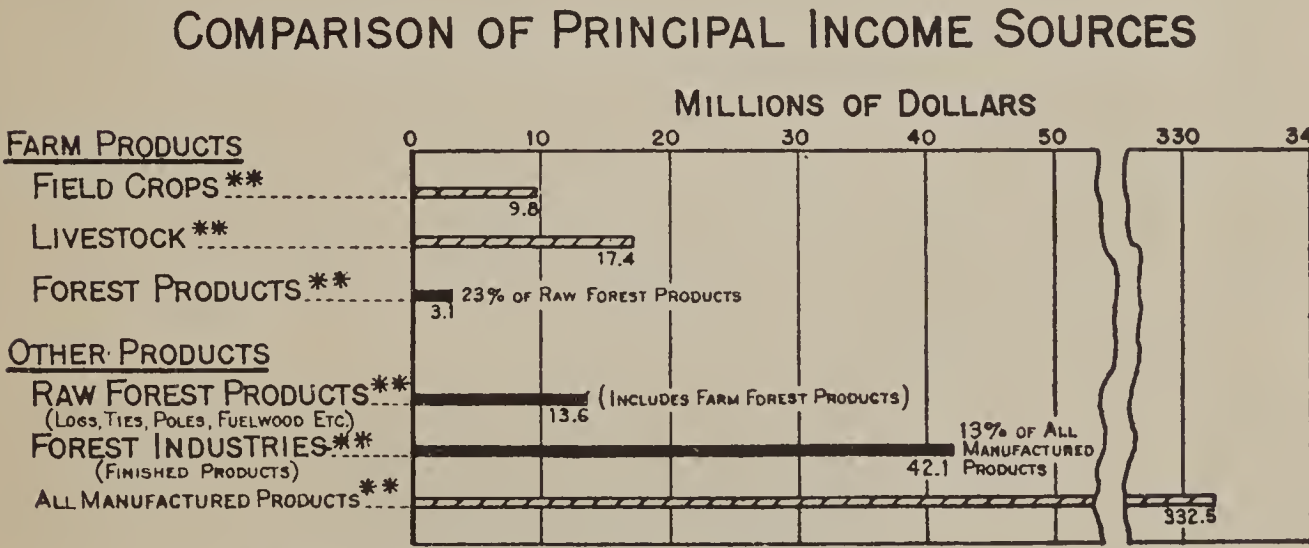
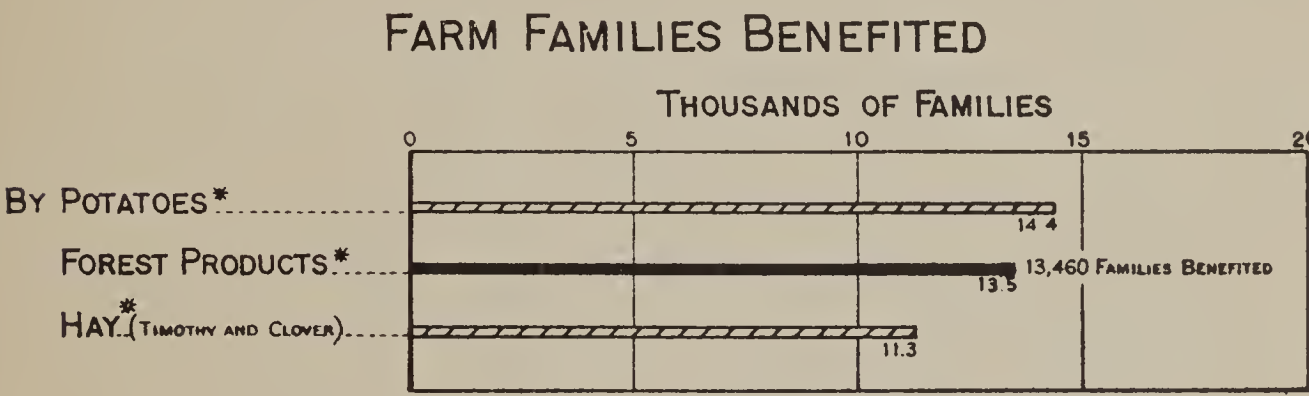
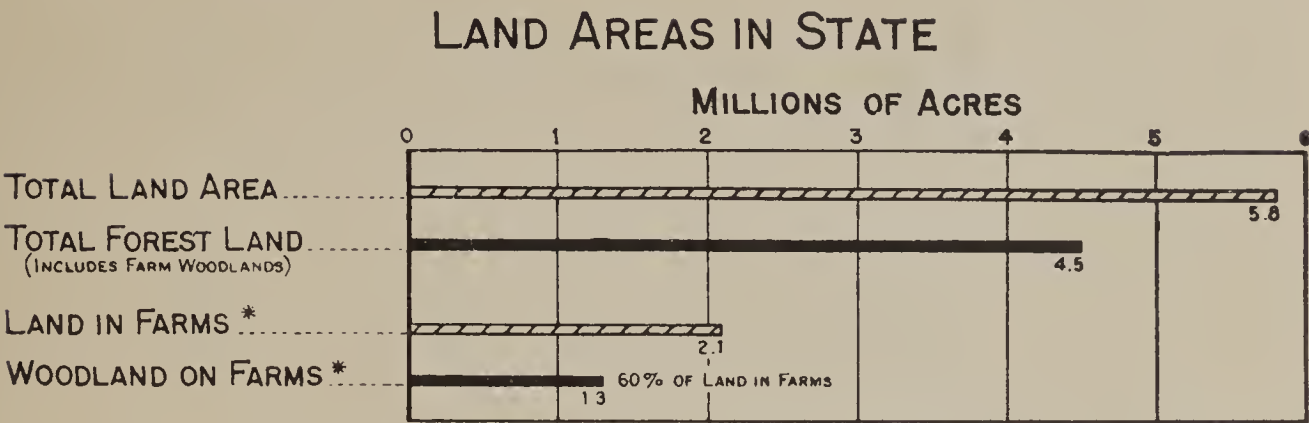


FARM LAND USE*		Area (Acres)
Crop Land (all classes)		443,844
Pasture Land		
Plowable and "Other"		284,590
Woodland pastured (see Woodland)		
Woodland (all classes)		1,273,826
Woodland pastured		676,286
Woodland not pastured		597,540
Other Land		94,288
Total Farm Land		2,115,548
CASH INCOME FROM LEADING FARM PRODUCTS**		
Forest Products cut and sold, Year 1934		\$982,000
Rank among all crops	First	
Forest Products		\$982,000
Potatoes		717,000
Truck Crops		446,000
Hay		340,000
Fruits (all kinds)		335,000
Value of all Forest Products, used or sold, Year 1934		\$1,429,000

* Census, 1935.
** Estimates by Bu. Agr. Econ.

FIG. 3

FARM WOODLANDS OF NEW HAMPSHIRE



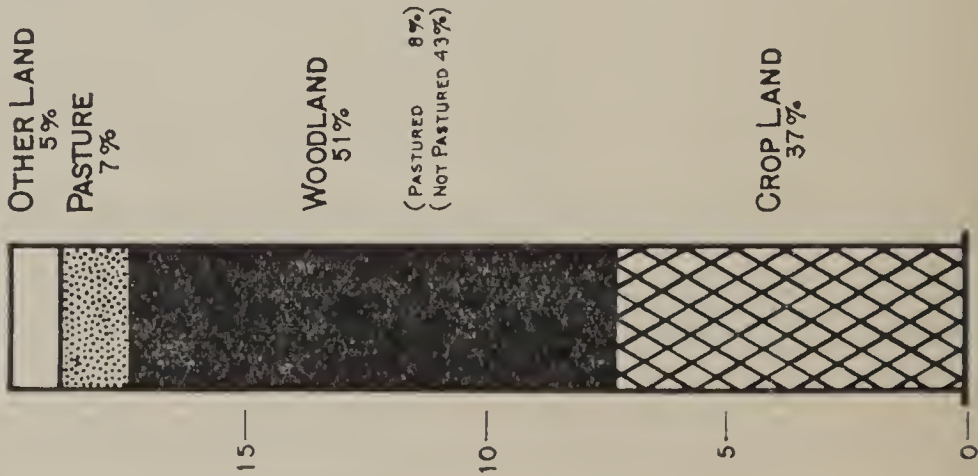
* 1935 CENSUS
** 1930 CENSUS

FIG. 4

FARM WOODLANDS OF NORTH CAROLINA

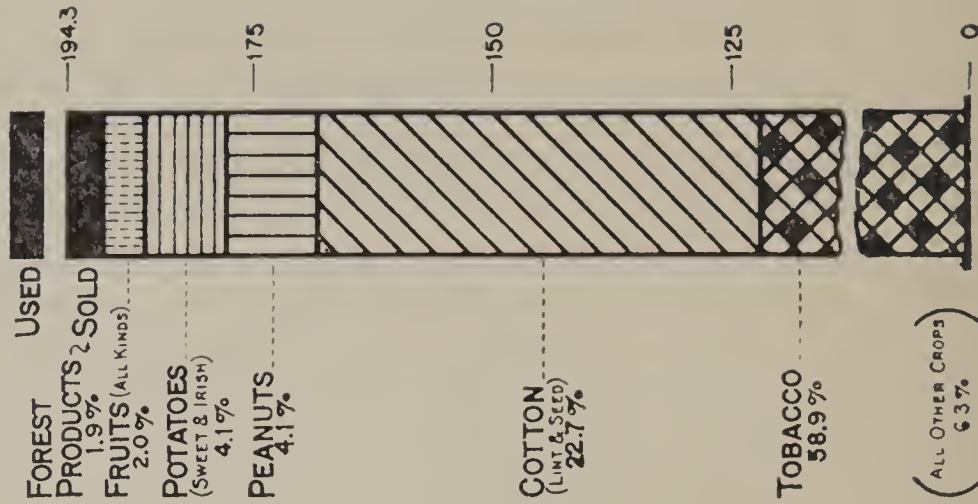
FARM LAND AREAS

ACRES
(MILLIONS)



CASH INCOME FROM SIX LARGEST CROPS

(ALSO VALUE OF USED FOREST PRODUCTS) DOLLARS
(MILLIONS)



FARM LAND USE*		Area (Acres)
Crop Land (all classes)		7,297,451
Pasture Land		
Plowable and "Other"		1,440,315
Woodland pastured (see Woodland)		
Woodland (all classes)		10,094,745
Woodland pastured		1,574,303
Woodland not pastured		8,520,440
Other Land		1,103,800
Total Farm Land		19,936,507

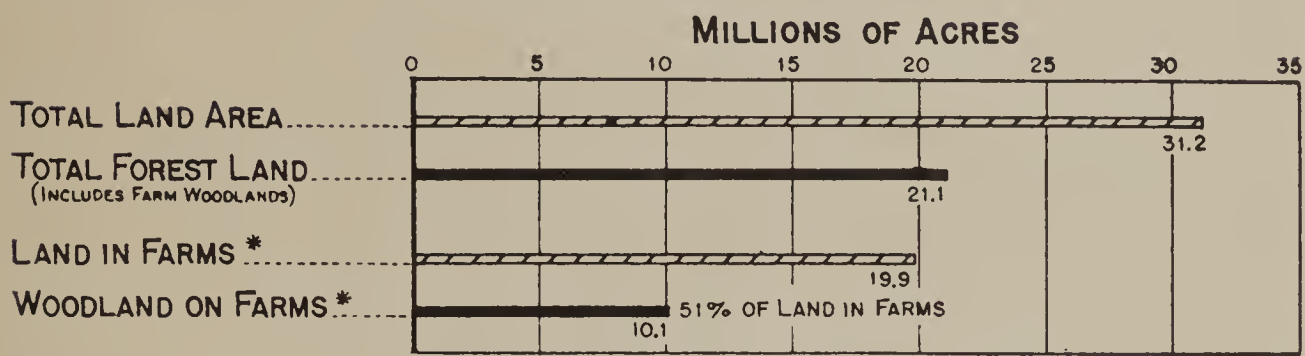
CASH INCOME FROM LEADING FARM PRODUCTS**		
Forest Products out and sold, Year 1934		\$5,872,000
Rank among all crops		Sixth
Tobacco	\$122,142,000	
Cotton (lint and seed)	46,983,000	
Peanuts	8,574,000	
Potatoes (Sweet and Irish)	8,465,000	
Fruits (all kinds)	4,254,000	
Forest Products	5,872,000	
Value of all Forest Products, used or sold, Year 1934		\$7,278,000

* Census, 1935.
** Estimates by Bu. Agr. Econ.

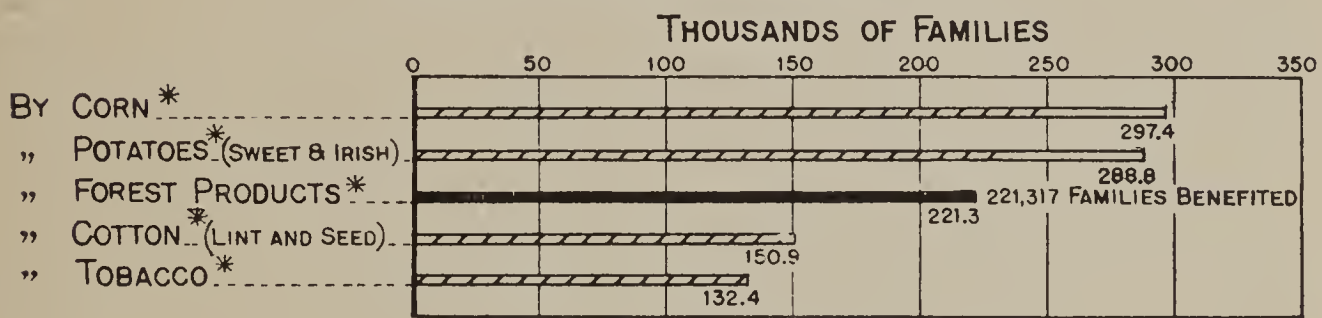
FIG, 5

FARM WOODLANDS OF NORTH CAROLINA

LAND AREAS IN STATE



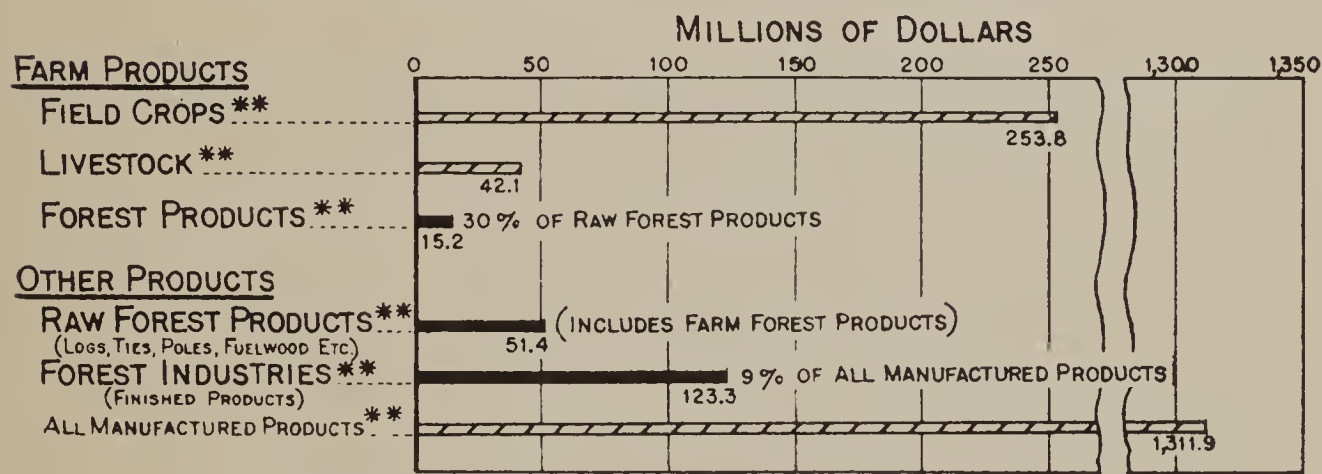
FARM FAMILIES BENEFITED



FARM FAMILIES IN STATE



COMPARISON OF PRINCIPAL INCOME SOURCES



* 1935 CENSUS
** 1930 CENSUS

FIG. 6

PINE POLES FROM AN OLD POTATO PATCH



FIG. 7

A young man from Nebraska moved on to a small, poor, sandy-land farm in southern Mississippi. Two acres of abandoned land, worn out in growing potatoes and watermelons, came up in longleaf pine saplings. This "brush," as the neighbors called such patches, meant more to this young farmer from the treeless plains than to the local residents, and he protected the young trees from fire. Later when the neighbors, in a friendly spirit, advised him to cut and burn his saplings in order to avoid the State tax on growing timber he refused to take their advice.

The young trees grew rapidly under protection, and the land became covered with a crowded stand of tall, straight poles. One day a timber buyer came along the sandy road. He looked over the stand, which he found contained more than 1,000 merchantable poles, and offered the owner \$600 for the standing trees. This was more "cash money" than the farmer had seen at one time in many years, and he gladly closed the deal at the buyer's figure, although at current stumpage prices the timber was worth considerably more money.

With no expense for labor or fertilizer, the farmer's timber crop yielded him a good net profit averaging \$5 an acre yearly for a period of 35 years.

TREES RECLAIM ERODED ACRES

The soil-holding power of trees on slopes is well known. Maintaining a forest cover on a slope is a sure and cheap method of protecting soil from erosion.



FIG. 8

To stop erosion in this field the farmer placed check dams in the gullies and planted red pine and black locust on the slopes.



FIG. 9

A view of the same site one year later. The dense growth of the locusts hides the pines, but they are flourishing in the shade of the locusts and are becoming well established. This field has been saved from complete devastation.

WOOD INSURES WINTER JOB



FIG. 10

A farmer, settling on a quarter section of cut-over timberland in northern Wisconsin, reserved 70 acres for permanent woodland and cleared the rest. The natural timber was pine, spruce, and fir. After a few years he began cutting timber carefully, always leaving the thriftiest and best to grow. This was winter work for him and his sons.

During a period of 31 years he has kept a record of the amount of timber cut and the money received for it. The timber cut has amounted to 700,000 board feet of saw logs, which has brought him in an average gross return of \$500 in cash yearly. Yet by his good management and cutting, the land at the end of the period (1932) has about 275,000 feet of standing timber.

The owner, in speaking of his forestry operations, admits that his woods have often been a source of temptation to him. "Many times in those earlier years," he said, "when cash was needed badly I was tempted to sell all the timber in one lump. But I did not do it. I knew that if I held on to my timber there would always be a winter job and some cash coming in. I am glad today that I never let it go."

FROM WORN-OUT HILLSIDE TO FARM WOODS



FIG. 11

For nine years this hillside on a Mississippi farm had been washing away. One Spring the farmer planted it with slash pine seedlings, which can be seen in the foreground.



FIG. 12

A view of the same field seven years later. The pines are 15 to 20 feet in height. They have been pruned and cared for, and are rapidly increasing in size and value. The hillside is now protected and the farmer has a permanent timber investment.

RETURNS IN GROWING TIMBER IN NEW HAMPSHIRE



FIG. 13

This white pine was planted on an abandoned sidehill pasture of about 3 acres in New Hampshire. At the age of 44 years (shown in the illustration) it contained about 90,000 board feet of lumber. The total outlay at the time, counting the value of the land and labor of planting, was \$35. The timber was worth on the stump something over \$1,500.

The farmer had this strip of practically worthless sidehill, and with some spare time on hand dug up 1,400 seedling pines growing in a thicket and set them out. About 20 years later the farmer died and among his assets was this small tract of young pine for which, much to her surprise, the widow was offered \$300. The second owner retained it for about 15 years and then, wishing some money, sold it. Soon afterwards it came into the hands of the third owners, a lumber company, for something over \$1,000.

Assuming a land value of \$5 per acre, and a charge for taxes and oversight for the period averaging \$2 per acre per year, the operation yielded a return of 5 per cent on the total investment in land, labor, and annual outlay, and in addition a neat sum equivalent to a yearly net profit from the start of \$2.34 per acre. To get this return required favorable markets.

WINDBREAKS AND SHELTERBELTS

THEY—

Protect growing crops, as well as livestock and man, from cold and parching winds.

Prevent soil from drying out rapidly.

Furnish wood products for farm use and for sale.

Beautify the homestead and make it more liveable.

Check erosion by wind.

Provide shelter for birds and animals.

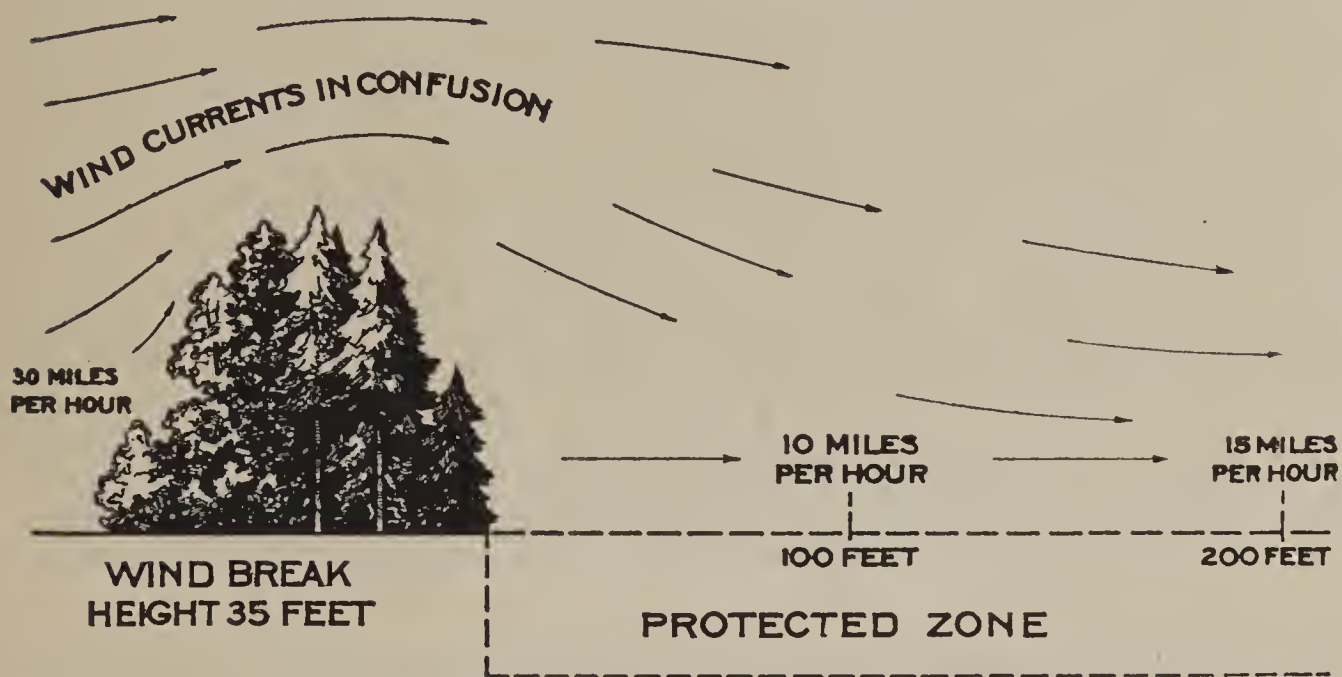


FIG. 14

The effect of windbreaks on wind velocity.



FIG. 15

A three-year-old windbreak on a farm in eastern Montana. Garden crops are growing in its shelter. This windbreak is a valuable investment for the farmer. It protects the home and beautifies the property.

PRODUCTS FROM FARM WOODS



FIG. 16

Home-grown fuelwood and fenceposts save money for the farmer. Each year fuelwood valued at \$150,000,000 is harvested on farm woodlands in the United States. Some of it is sold, thereby increasing the farm income.



FIG. 17

The sale of pulpwood is an important item of farm income. If cut as a thinning in accordance with forestry practice, removal of the wood may actually improve the growth of the remaining trees and increase the value of the stand.

PRODUCTS FROM FARM WOODS,



FIG. 18

In some years more than 15,000,000 cross-ties are cut from the farm woodlands of the United States. Ties provide welcome revenue for many farms. They may be harvested profitably during the winter or in other slack seasons.

FARM PRODUCTS IN TERMS OF MONEY

Timber products from farm woodlands ranked ninth in gross income value among the agricultural crops of the United States in 1934, according to estimates by the Federal Bureau of Agricultural Economics. This estimate included the value of wood products used in the maintenance and operation of the farms.

Expressed in cash income, forest products, cut and sold on farms in 1934, ranked first in New Hampshire and Vermont; second in Maine; third in West Virginia; fourth in Georgia, Wisconsin, and Missouri; and fifth in New York, Rhode Island, North Carolina, Kentucky, Tennessee, Alabama, Mississippi, and Arkansas.

CASH AND GROSS INCOMES FROM VARIOUS CROPS (1934)

KIND OF CROP	Cash Income From Sale of Products	Gross Income or Total Value of Crop
Cotton (lint and seed).....	\$722,842,000	\$722,842,000
Fruits and nuts.....	436,191,000	464,301,000
Wheat.....	289,169,000	303,284,000
Truck crops.....	249,045,000	259,045,000
Tobacco.....	240,937,000	240,939,000
Potatoes (incl. sweet potatoes).....	150,350,000	209,233,000
Farm gardens.....	195,402,000
Corn.....	110,888,000	137,279,000
Hay.....	85,898,000
FOREST PRODUCTS.....	62,782,000	116,738,000

(All other crops less than above amounts.)

From the foregoing figures it will be found that for every 70c worth of farm woods products used on the farm where grown, \$1 worth was sold and returned to the farm as cash income.

Prepared by Division of Private Forestry
United States Forest Service
Washington, D. C.

Further information on Farm Forestry and Farm Woodlands may be
secured without cost from your State Forester, State
Extension Forester, or the United States Forest
Service, Washington, D. C.

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